

CEB



energy fuels nuclear, inc.

executive offices • suite 900 • three park central • 1515 arapahoe • denver, colorado 80202 • (303) 623-8317

June 4, 1981

Mr. Reed C. Christensen
Forest Supervisor
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

Dear Mr. Christensen:

As agreed upon during our meeting on April 4 in your office, and as reiterated in your letter of May 7 to Dean Roberts, Energy Fuels Nuclear herewith submits two copies of a Reclamation Plan for the Glade Pit. We believe this plan will accomplish all reasonable reclamation objectives, and will return the land to a useful and aesthetically acceptable condition.

The timetable for completion of this reclamation program is the end of the construction season of 1982. As such, probably no work will be performed on the project this year.

We trust you will find this plan acceptable. If you desire further discussion on the subject, please do not hesitate to contact us. In my absence or unavailability, you may direct inquiries to C. E. Baker or R. M. Steele.

Sincerely yours,

MD Vincelette

M. D. Vincelette
Vice President, Operations

MDV/jf

xc: CEB, RMS, DLR, RBS

GLADE PIT RECLAMATION

The Glade mine is located on the Glade 11 and Glade 12 lode mining claims in Section 33, T33S, R20E and Section 4, T34S, R20E, San Juan County, Utah. The location is within the Manti-La Sal National Forest and its surface use governed by regulations of the U.S. Forest Service.

Reclamation work will be accomplished with equipment from Energy Fuels Nuclear's (EFN's) Uranium Mill near Blanding, Utah, 30 miles away. Local contractors may be used for some portions of the work, but the majority will be done by EFN. Bulldozers, trucks, front-end loaders and rock drills will be the main equipment used. Generally, not all this equipment will be operating at any one time and the personnel on site will range from one to eight. From start to finish, the work will require two months if no weather or equipment problems develop.

The actual reclamation is divided into five separate phases: (1) clean up and burial of any low-grade material, (2) relocation of the adjacent Forest Service road, (3) smoothing and flattening of the pit and dump contours, (4) covering the disturbed area with available topsoil, and (5) reseeding. The area and nature of these activities are noted on the enclosed Map #1, which shows the current status of the mine area. Map #2 shows an approximation of the mine area after reclamation. The base for these maps was not generated by EFN and is thought to be from previous Forest Service work.

The first activity will be to locate any low-grade uranium waste in the mine area. This material generally will contain from 0.02 to 0.08% U_3O_8 . The burial site for this material,

if found, would be the west stripping ramp. As noted on the map, weathered material in the burial site would be dozed into the pond first and then the low-grade buried. This location is at least 25 ft above the new drainage elevation and surrounded on three sides by undisturbed bedrock or soil. The south side and top will be capped by at least 3 ft of fill, compacted by dozer.

The second step would be to realign the Forest Service road that now skirts the south and west edges of the current pits. The new road generally follows old drill roads, as noted on Map #1, and is designed to minimize the need to cut trees. The new road returns to the existing alignment just 200 ft north of the map's edge. While the road should be started early in the project, it will not be finished until the end of the work because two intervals cannot be completed until late in the project. The crossing of Steven Creek cannot be completed until the existing channel can be abandoned, and a second interval that crosses the topsoil stockpile will not be completed until that material is used. Despite these intervals, road traffic will be directed over this new road early in the project so that areas of the old road can be bulldozed into the pit.

Smoothing the contours and flattening the pit slopes will require the greatest effort. All but a small portion of the existing pit wall will have its surface changed. First, two rocky bluffs on the west and south side will be drilled and blasted so that a dozer can move the material. Then, dozers will push the soil and rock toward the center of the pit. It is very likely the dozer work will expose other areas of bedrock that will require blasting. In areas of steep slopes, the first movement will cross the slope until a toe can be established. A dozer cannot back up a slope of loose material

steeper than 3:1. With water in the pit bottom, care is needed that a dozer does not get caught on the pit wall and cannot get out.

Most of the final slope will be 3 horizontal to 1 vertical. Minor exception will be made near the shore line, around small bedrock that cannot be dozed and a small tree grove on the northeast pit edge. Because of the Forest Service's desire that the work not go east of the existing channel, the toe of the east pit wall, near the pond shore, will have a slope more than 3:1.

At the same time the pit walls are being flattened, a new channel across the dump will be excavated. In the final pit wall work, the material from this channel cut could be pushed or trucked to any location needing extra fill. The channel will be cut down to below the pre-mine surface of 1015 ft.

The elevation of the final pond surface will be near 1020 ft. Previous mining had taken place to 950 ft. Natural caving and sedimentation has already filled in 20 ft of the pit. Material dozed into the pond edge will bring the deepest portion up another 10-20 ft, plus flattening the contours. The slope below water will be both steeper and more varied than above the pond's surface. The average pond depth after reclamation will be in the 15-30 ft range with a likely maximum depth of 35 ft. Natural sedimentation could completely fill the pond during the next 25 years.

Two intervals of the new channel may need rip-rap; the entrance to the pit and the discharge into the existing drainage. Solid bed may be exposed in the excavation of the new channel and no rip-rap will be needed.

By pushing in the existing pit wall, the new pit slope will be covered by soil or the shallow weathered bedrock, and will need no further topsoil. The existing topsoil will be used exclusively on the top and edges of the dump. Prior to placement of any topsoil, the dump top will be smoothed and have its edges rounded.

Reseeding of the whole area with a mixture of native and domesticated seeds will be the final activity. No fertilizer or straw bedding is planned.

*approved?
by FS*

Enclosures: Map #1 Existing Contour and Main Reclamation Activity, Scale 1'=50'

Map #2 Generalized Reclaimed Mine Contour, Scale 1"=50'

GLADE PIT RECLAMATION

Energy Fuels Nuclear, Inc. (EFN) will reclaim the Glade Open-pit Uranium Mine by late 1982. This mine is located on the Glade 11 and Glade 12 lode mining claims in Section 33, T33S, R20E and Section 4, T34S, R20E, San Juan County, Utah. The location is within the Manti-La Sal National Forest and its surface use governed by regulations of the U.S. Forest Service.

Reclamation work will be accomplished with equipment from EFN's Uranium Mill near Blanding, Utah, 30 miles away. Local contractors may be used for some portions of the work, but the majority will be done by EFN. Bulldozers, trucks, front-end loaders and rock drills will be the main equipment used. Generally, not all this equipment will be operating at one time and the personnel on site will range from one to eight. From start to finish, the work will take two months if no weather or equipment problems develop.

The actual reclamation is divided into five separate phases: (1) clean up and burial of any low-grade material, (2) relocation of the adjacent Forest Service road, (3) smoothing and flattening of the pit and dump contours, (4) covering the disturbed area with available topsoil, and (5) reseeding. The area and nature of these activities are noted on the enclosed Map #1, which shows the current status of the mine area. Map #2 shows an approximation of the mine area after reclamation. The base for these maps was not generated by EFN and is thought to be from previous Forest Service work.

The first activity will be to locate any low-grade uranium ore in the mine area. This material generally will contain from

0.02 to 0.08% uranium. The burial site for this material would be the west stripping ramp. As noted on the map, weathered material in the burial site would be dozed into the pond first and then the low-grade buried. This location is at least 25 feet above the new drainage elevation and surrounded on three sides by undisturbed bedrock or soil. The fourth or south side and top will be capped by at least 3 ft of fill, compacted by dozer.

The second step would be to realign the Forest Service road that now skirts the south and west edges of the current pits. The new road generally follows old drill roads and is noted on Map #1. This route minimizes the need to cut trees. The new road returns to the existing alignment just 200 ft north of the map's edge. While the road should be started early in the project, it will not be finished until the end of the work because two intervals cannot be completed until late in the project. The crossing of Steven Creek cannot be completed until the existing channel can be abandoned, and second interval that crosses the topsoil stockpile will not be completed until the material is used. Despite these intervals, road traffic will be directed over this new road early in the project so that areas of the old road can be bulldozed into the pit.

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